

NOTES FOR THE FLORA OF DOMINICA: SPERMACOCE
CONFUSA AND SCHRADERA EXOTICA (RUBIACEAE)

DAN H. NICOLSON

THIS PUBLICATION constitutes another contribution largely arising from the Bredin-Archbold-Smithsonian Biological Survey of Dominica (1964–1970) which sent about twenty actively collecting botanists to Dominica for up to three months each. Their collections, as well as those of earlier and subsequent botanists, provide the basis for preparing the dicots for the *Flora of Dominica* initiated by W. H. Hodge (1954), who completed the ferns, fern allies, gymnosperms, and monocots. With the help of Richard A. Howard, who volunteered a preliminary checklist of the dicots of Dominica, and a number of specialists who have contributed various families, we are very close to completion, only eight of 118 dicot families still to be done. This particular publication is intended to take care of more extensive nomenclatural comments than are usual in floristic works.

The comment by my respected colleague, F. Raymond Fosberg, that my method of citing references in synonymies is “unfortunate” impels me to explain why it was adopted. The references in synonymies appear in “short form” but are fully expanded in the bibliography, including titles, pages (or volumes), and dates of each complete article or work. It has struck me as mildly anomalous that botanists should handle references in synonymies (in “long form,” with author, abbreviated title, page, and date; nothing in the bibliography) differently than they handle the same reference in texts (in “short form,” with author, date, and page; full expansion in the bibliography).

Experienced botanists are used to the abbreviated titles and normally have no difficulty recognizing the correct title without the help of expansion in the bibliography. Others will perceive the abbreviated titles of “long form” for what they are, jargon, known only to the cognoscenti. Of course, the jargon is part of taxonomic literature (cf. *Index Kewensis*), and its mastery will continue to be part of a botanist’s apprenticeship. The taxonomist who cannot remember that “Sw. Prod.” is Swartz’s *Nova Genera & Species Plantarum*. . . . will forever be at a disadvantage in dealing with West Indian botany. However, that does not mean that we cannot try to avoid the jargon.

It seemed appropriate to attempt consistently to use “short form” in a floristic work, the *Flora of Dominica*. I am not yet advocating it,¹ merely trying it. It is used in this short paper because it is easier to maintain the format of the *Flora of Dominica*.

The main problem of “short form,” beyond the necessity of checking the original publications for full titles and pagination for the bibliography,

¹The editorial board of this Journal does not advocate this method either, but is willing to accept an example of Dr. Nicolson’s experiment. — *Eds.*

is dealing with different publications in the same year by the same author. In a bibliographically rich work, such as a flora, one never knows whether or not this will occur until one is finished. In order to avoid retroactive and constant revisions of completed work, I have opted to add an abbreviated title reference in support of the date whenever a particular publication spans more than a year. Although this looks like and can function like the abbreviated titles of "long form," it is really only a possibly necessary clarification of the usual "short form" reference to the fully expanded reference in the bibliography.

Spermacoce confusa Rendle, 1936 (Jan.), p. 12; Fawcett & Rendle, 1936 (July), Fl. Jam. 7: 120; Gillis, 1974, p. 185.

Spermacoce tenuior sensu auct. plur., non Linnaeus, 1753, p. 102; Gaertner, 1788, Fruct. 1: 122. *t.* 25, *f.* 9; Bacigalupo, 1972, p. 344, *f.* 1. (For more citations, see Fawcett & Rendle, 1936, Fl. Jam. 7: 120, and Gillis, 1974, p. 185.)

Leaves paired, rough above; inflorescences few-flowered; stamens included; calyx lobes equal; capsule crustaceous, hirtellous; the cocci attached, unequal, one with three calyx lobes and closed, the other with one calyx lobe and open; seed glossy brown, finely reticulate.

Neotropics; in Dominica as a roadside weed: Pointe Ronde (*Hodge 2639*).

Note: The possibility that the Linnaean binomial, *Spermacoce tenuior*, was being misapplied was first argued by Rendle (1934) when he demonstrated that *S. tenuior*, described by Linnaeus (1753, p. 102) as "*glabra*," had come to be misapplied to a scabrid species. He traced the typification to specimens of Dillenius cultivated at the Hortus Elthamensis and clarified the reasons for the subsequent misapplication. He concluded that what was then called *S. riparia* Chamisso & Schlechtendahl was actually *S. tenuior* Linnaeus, and what was then called *S. tenuior* probably should be called *S. remota*.

In a subsequent paper, Rendle (1936) reported study of the type material of *S. remota* Lamarck, showed that it is a distinct species, and proposed a new species (erroneously calling it a *nomen novum*, correct only for renaming a taxon with a validly published but illegitimate name, not for naming a new species with a misapplied name), *S. confusa* Rendle, for *S. tenuior* sensu auct. Gillis (1974), feeling that the name was not validly published because it lacked a Latin description, provided one. However, I believe that Rendle satisfied the requirements in Article 36 for valid publication by "reference to a previously and effectively published Latin description or diagnosis of the taxon" when he cited "K. Schumann in Martius, Flor. Brasil. (vi. 6, p. 33)." I regard the citation of p. 33 as a correctable slip of the pen for p. 34, on which Schumann's Latin description of *S. tenuior* sensu auct., non Linnaeus, appears. I grant that the reference appears in the early part of the paper in an explanation of why

he earlier thought *S. remota* Lamarck to be an applicable name, two pages before he actually proposes *S. confusa*. However, despite the separation of the validating reference to a Latin description of the taxon from the new species itself, it seems to me that Rendle has, in fact, satisfied the spirit and letter of Article 36.

Bacigalupo (1972) rejected Rendle's lectotypification, adopting another Dillenian specimen found by Burkart which had been overlooked by Rendle. However, I cannot accept her lectotypification for the Linnaean name since it is contrary to Linnaeus's own description of *S. tenuior* as "glabra." What she calls *S. tenuior* I would call *S. confusa* Rendle, and what she calls *S. riparia* I would call *S. tenuior* Linnaeus. It is clear that Dillenius mixed elements of *S. confusa* (with scabrid leaves and hirtellous capsule) and *S. tenuior* (with glabrous leaves and capsule). Irrespective of how one might lectotypify the Dillenian pre-1753 taxon (*Spermacoce verticillis tenuioribus* Dillenius), it seems apparent that the Linnaean name must be typified on a glabrous element.

Schradera exotica (J. F. Gmelin) Standley, 1929, p. 286.

Urceolaria exotica J. F. Gmelin, 1791, Syst. Nat., ed. 13, 2: 390; Standley in N. Am. Fl., 1921, 32: 132.

Schradera capitata sensu Vahl, 1796, Eclog. 1: 35. t. 5 (as to Monserrat material, not as to synonym, *Fuchsia involucrata* Swartz).

Schradera capitata Vahl ex Willdenow, 1799, Sp. Pl. 2: 238, later homonym.

Urceolaria capitata Fritsch, 1894, p. 288, *nom. superfl.*

Schradera vahlii Steyermark, 1964, p. 277, *nom. superfl.*

Schradera vahlii var. *acutifolia* Steyermark, 1964, p. 277.

Succulent liana or shrubby tree to 7 m.; stipules membranous, more than 1 cm. long, deciduous, lower half united; inflorescence terminal, a pedunculate head subtended by a peltate involucre; flowers white; berry white and fleshy.

Hispaniola to Grenada; infrequent to common in Dominica on slopes from 400 to 850 m.: Morne aux Diabes (*Nicolson 1935*), En Haut Jean (*Webster 13513*), Pont Cassé area from Deux Branches to Castle Bruce turnoff (*Ernst 1671*, *Stern & Wasshausen 2546*, *Wilbur 7749*), Freshwater Lake area (*A. C. Smith 10289*, *Gillis 8220*, *Wilbur 7394*), Breakfast River (*Hodge 1892*), lower slopes of Morne Plat Pays (*Wilbur 7855*).

Note: The nomenclature of this species has been controversial. The synonymy above indicates that this species has been called *Urceolaria exotica* (1791, 1921), *Schradera capitata* (1796, 1799), *Urceolaria capitata* (1894), *Schradera exotica* (1929), and *Schradera vahlii* (1964). There are several points of disagreement of which the first, *Urceolaria* vs. *Schradera*, has been settled by conservation of *Schradera* and rejection of *Urceolaria*. A second point, raised by Fritsch (1894), questions the validity of publication of *Urceolaria exotica* Gmelin (1791). This really is a question of whether or not a reference (by Gmelin) to an earlier generic

description (by Willdenow) can validate a specific name. Fritsch (1894) argued that the species was not separately diagnosed and could not be accepted. The I.N.G. staff reviewed this question, and I agree with their position that, under Article 32, there is no requirement that a species be validated by a reference to a description of the taxon *in the same rank*. It is true that Article 41 specifically precludes validation of generic names by reference to an earlier description, unless the description is of a "genus in that rank or as a subdivision of a genus," thus specifying rank. However, there is no comparable language specifying rank for a description validating a species name, as long as the later author means the same taxon as the earlier; that is, that the generic taxon is monotypic. Gmelin (1791) provided many specific epithets for monotypic genera published by earlier authors of "Genera Plantarum," such as Jussieu and Schreber. These are accepted and to be seen in Appendix III of the Code: *Cansjera rheedii*, the type species of *Cansjera*, *Securinega durissima*, the type species of *Securinega*, not to mention *Urceolaria exotica*, the type species of *Urceolaria*.

Steyermark (1964) argued that *Urceolaria exotica* Gmelin is rejectable as a *nomen confusum* under Article 69, because Standley (1921) applied the name to a concept including *Schradera capitata* of the Antilles, *S. brasiliensis* of Brazil, and *S. cephalophora* of Cuba, all regarded by Steyermark as distinct species. I reject the argument that *Urceolaria* (*Schradera*) *exotica* has been used in different senses and has become a source of error. The binomial has always included the Antillean element and, although applied to a broader species concept, has never been restricted to a species concept excluding the type, as specified in the examples given for Article 69. In any case, the Leningrad Congress modified this Article to establish a list of *nomina specifica rejicienda*, and it can now be invoked only by having a name proposed and accepted for rejection.

Another problem arose when Vahl (1796) published *Schradera capitata* and included an earlier name, *Fuchsia involucrata* Swartz (1788), in synonymy. This constitutes a superfluous name under Article 63 for which Article 7, paragraph 10, requires automatic typification of *S. capitata* Vahl, *nom. illeg.*, on the type of the Jamaican type of *Fuchsia involucrata* Swartz. Willdenow (1799), realizing Vahl's error, excluded the offending synonym, thereby creating a new *Schradera capitata*, a later homonym, with a different type than that of Vahl's earlier binomial.

Fritsch (1894) created *Urceolaria capitata* Fritsch, probably based on *Schradera capitata* Willdenow (later homonym) but possibly based on *Schradera capitata* Vahl (superfluous name). In any case, Fritsch's name is based on an illegitimate basionym and, under Article 72, Note, is to be treated as a new name, not a new combination. However, Fritsch erroneously rejected the earliest available name, *Urceolaria exotica* Gmelin, and his new name must be regarded as a superfluous renaming of *Urceolaria exotica*.

Another problem arose when Standley (1929) published *Schradera exotica* (J. F. Gmelin), *comb. nov.*, based on *Urceolaria exotica* J. F.

Gmelin. He added another synonym, *Schradera capitata* Vahl, without excluding its earlier synonym and obligate type, *Fuchsia involucrata* Swartz, suggesting that his binomial might be another superfluous re-naming of *Fuchsia involucrata* Swartz. However, the last paragraph of Article 55 is very clear that a new combination must be typified on the type of its basionym, irrespective of the circumscription of the taxon to which it was applied or, more particularly, misapplied. The last paragraph of Article 63 is also pertinent.

Thus, under the present Code, I can see no barrier to acceptance of *Schradera exotica* (J. F. Gmelin) Standley and reject *Schradera vahlii* Steyermark as a superfluous name.

Taxonomic note: Steyermark (1964, p. 277) recognized *Schradera vahlii* var. *acutifolia* Steyermark from two Dominican collections (*A. C. Smith* 10289, holotype, from Freshwater Lake, and *Lloyd* 185, paratype, from Laudat). He regarded the presence of an acute to subacuminate leaf apex combined with an acute to subacute leaf base as a rare variation in a species in which the apex is normally obtuse and the base varies from rounded or obtuse to subacute. Study of topotypes (*Gillis* 8220 and *Wilbur* 7394) shows the typical obtuse to subacute leaf apices and subtruncate to obtuse leaf bases, suggesting this taxon could hardly be more than a forma. In addition, study of the isotype indicates that it is in young bud or flower and that the leaves may be unexpanded. Study of seven other Dominican collections indicates that the narrowest and most acute leaves are typical of the youngest and outermost leaves. *Webster* 13513 is particularly instructive, the leaves ranging from being small and acute (5 × 2 cm.) to large and broad (11 × 7 cm.). Survey of 25 specimens from other islands indicates variability in leaf shape from rather narrow to quite broad. Curiously, the narrowest and broadest leaf shapes are on Dominica. In conclusion, I cannot accept the existence of a distinct narrow-leaved taxon on Dominica, even as a variety.

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WASHINGTON, D. C. 20560